What is claimed is:

1. A device for manipulating a molecule *in vivo* relative to a target tissue comprising a support and at least one electrode member extending away from and affixed to or defining the support, the at least one electrode member having a plurality of conductive portions and a nonconductive portion, wherein:

the conductive portions are positioned in spaced-apart relation from each other, each conductive portion being in circuit communication with a respective portion of a source of electrical energy;

the conductive portions are configured to establish a first electromagnetic field between selected conductive portions sufficient to manipulate a molecule relative to a target tissue and a second electromagnetic field sufficient to cause transient permeability of a cell membrane within the target tissue; and

at least two of the conductive portions are locatable against a selected portion of the target tissue.

2. The device recited in Claim 1, wherein the conductive portions and the nonconductive portion are located on a single support member.

3. The device recited in Claim 1, wherein the conductive portions and nonconductive portion are located on separate support members.

4. The device recited in Claim 1, wherein the electrode member comprises a plurality of electrode members affixed to the support and the conductive portions and the nonconductive portions are located along the electrode members.

5. The device recited in Claim 1, wherein the conductive and the nonconductive portions comprise even pairs thereof.

6. The device recited in Claim 1, wherein the conductive and the nonconductive portions comprise uneven pairs thereof.

7. The device recited in Claim 1, wherein the support comprises a generally cylindrical post having a portal therethrough from a top end to a bottom end and the device further comprises:

a disc affixed to the post bottom end, the disc having a bottom surface having an outer downwardly depending annulus comprising alternating sectors of conductive and nonconductive areas, the electrode member comprising the annulus and the conductive portions comprising the conductive sectors; and

a lead in circuit communication with each conductive area and extending from the disc through the post portal to the top end thereof.

8. The device recited in Claim 7, wherein the disc has a noncircular shape.

9. The device recited in Claim 7, further comprising:

a plurality of contact means positioned adjacent the post portal top end and in circuit communication with each lead; and

interface means positioned adjacent the post portal top end having means for communicating with each contact means for establishing circuit communication with a signal generator.

10. The device recited in Claim 9, wherein:

each of the contact means comprises a contact brush affixed within the portal against an inner wall thereof; and

the interface means comprises a key interlock insertable within the portal at the top end thereof and having a contact pad positioned for communication with each contact brush.

11. The device recited in Claim 7, wherein the disc comprises a flexible material for permitting shape adaptation with the selected portion of the target tissue.

12. The device recited in Claim 7, wherein the disc comprises a portion having sufficient transparency to permit visualization of the target tissue selected portion therethrough.

13. The device recited in Claim 1, further comprising means for delivering a preselected pattern of signals to selected pairs of the conductive portions to effect a desired molecular result.

14. The device recited in Claim 13, wherein the conductive and nonconductive portions comprise even pairs thereof.

15. The device recited in Claim 13, wherein the conductive and nonconductive portions comprise uneven pairs thereof.

16. The device recited in Claim 1, further comprising a downwardly depending post affixed adjacent a bottom end of the support, the post having at least one conductive area on a surface thereof.

17. The device recited in Claim 16, wherein the downwardly depending post has a plurality of conductive portions thereon.

18. The device recited in Claim 17, wherein the conductive and the nonconductive portions comprise even pairs thereof.

19. The device recited in Claim 17, wherein the conductive and the nonconductive portions comprise uneven pairs thereof.

20. The device recited in Claim 16, wherein the downwardly depending post has a single conductive portion thereon comprising an electrode.

21. The device recited in Claim 20, wherein the post comprises a plurality of downwardly depending posts, each post axially movable between a first position and a second position lower than the first position and biased to the second position, for achieving contact between each post and a target tissue surface.

22. The device recited in Claim 21, wherein each post is affixed to the support in spring-loaded fashion.

23. The device recited in Claim 21, wherein each post extends in a generally linear fashion from the distal end of the support.

24. The device recited in Claim 21, wherein the posts are curved with respect to the distal end of the support.

25. The device recited in Claim 16, wherein each post has a pointed conductive bottom tip, the tips disposed at a radially inwardly facing angle to each other, each post inwardly movable between a first position and a second position wherein the tips are closer together than in the first position, the second position for gripping tissue between the tips.

26. The device recited in Claim 1, further comprising a pair of electrode-bearing members movably affixed to the support in separation-adjustable fashion, each electrode-bearing member comprising means for affixing at least one electrode thereto.

27. The device recited in Claim 26, wherein each electrode-bearing member comprises an insulating plate, and wherein the electrode members comprise a plurality of electrodes affixed to an inward-facing surface of each plate, the plates configured to grip at least a portion of the target tissue therebetween.

28. The device recited in Claim 1, further comprising means for establishing at least one pair of opposite-polarity voltages approximately simultaneously on a respective pair of conductive portions.

29. The device recited in Claim 1, further comprising means for selectively activating each conductive portion in a predetermined pattern.

30. The device recited in Claim 29, wherein the source of electrical energy comprises a signal generator and the activating means comprises software means in controlling relation to the signal generator.

31. The device recited in Claim 1, wherein the support has a lumen therethrough dimensioned for admitting a syringe needle thereinto to permit an introduction of a substance containing the molecule into the target tissue.

32. The device recited in Claim 1, further comprising a needle member depending from a bottom of the support, the needle member having a pointed tip and an opening adjacent the tip, the tip and the opening positioned beneath the electrode member, the needle member adapted to deliver a substance containing the molecule through the opening into the target tissue.

33. The device recited in Claim 1, further comprising means for facilitating attachment of the electrode member to the target tissue.

34. The device recited in Claim 33, wherein the facilitating means comprises a mechanical means.

35. The device recited in Claim 33, wherein the facilitating means is selected from a group consisting of a barb and surface roughness.

36. The device recited in Claim 33, wherein the facilitating means comprises a chemical means.

37. The device recited in Claim 36, wherein the facilitating means is selected from a group consisting of bioadhesives and adhesives.

38. A method for achieving a desired distribution and delivery of a molecule from an initial location into a target tissue, the method comprising the steps of:

placing at least one electrode-bearing member containing areas of conductivity capable of having reverse polarities, generally adjacent, but in nonpenetrating fashion to, a surface adjacent a target tissue, each electrode in circuit communication with a respective portion of a source of electrical energy;

establishing a first electrical potential between a pair of the areas of conductivity sufficient to cause electromigration of the desired molecule from the initial location toward the target tissue; and

establishing a second electrical potential between a pair of areas of conductivity higher than the first electrical potential sufficient to cause electroporation in the target tissue for enhancing a movement of the desired molecule into a cell thereof.

39. The method recited in Claim 38, wherein the establishing steps comprise establishing a series of first and second electrical potentials in a predetermined sequence of pulses.

40. The method recited in Claim 38, further comprising the step of establishing a third electrical potential between a pair of areas of conductivity sufficient to cause

electromigration of the desired molecule from a location adjacent the target tissue through a pore in a cell membrane of the target tissue into an interior thereof.

41. The method recited in Claim 40, wherein the establishing steps comprise establishing a series of first, second, and third electrical potentials in a predetermined sequence of pulses.

42. The method recited in Claim 38, wherein the electrode members are configured to at least partially surround a surface projection or a projection within an orifice near a periphery of the target tissue.

43. The method recited in Claim 38, wherein the electromigration is effected to cause the molecule to be delivered beneath a skin layer.

44. A method for delivering a bioactive molecule from an initial location to a target tissue, the method comprising the steps of:

placing at least one electrode member having areas of conductivity of opposite polarities against a surface generally adjacent, but in nonpenetrating fashion to, a target tissue, each member bearing sections of reverse polarity, each electrode member being in circuit communication with a respective portion of a source of electrical energy;

activating a pair of the areas of opposite polarity to achieve an electromigration of the bioactive molecule from the initial location to a location adjacent the target tissue; and

activating a pair of the areas of conductivity to achieve electroporation of a cell membrane within the target tissue sufficient to permit entry of the biological molecule into the cell interior.

45. The method recited in Claim 44, wherein the electromigration is effected to cause the molecule to penetrate a skin layer.

46. A method for bringing two molecules from two respective initial locations into apposition at a desired target tissue site for permitting a reaction therebetween, the method comprising the steps of:

placing an electrode member containing at least two areas of conductivity thereon against a surface adjacent a desired target tissue site;

activating the areas of conductivity to cause an electromigration of the first and the second molecule to a third area adjacent the target tissue site; and

permitting the first and the second molecule to react at the third area.

47. The method recited in Claim 46, wherein the activating step comprises establishing an electrical potential between the pairs of areas of conductivity sufficient to cause the electromigration of the first and second molecule in a desired direction.

48. The method recited in Claim 47, wherein the electromigration is effected to cause the first and the second molecule to penetrate a skin layer.

49. The method recited in Claims 46, wherein the activation step causes the first and the second molecule to be delivered to an internal compartment or cytosol of cells comprising the target tissue.

50. The method recited in Claim 46, wherein the penetration step is effected through a biological tissue other than skin.

51. The method recited in Claims 46, wherein the activating step is sufficient to cause electromigration but is insufficient to cause electroporation.

52. The method recited in Claim 46, further comprising the step, prior to the activating step, of activating the areas of conductivity to cause an electroporation of the target tissue.

53. The method recited in Claim 46, wherein the electromigration is effected from a plurality of sides of the target tissue, and wherein the electrode member comprises a plurality of electrode members adjacent the target tissue.

54. The method recited in Claim 53, wherein the electrode member comprises a plurality of electrode members, and wherein the activating step is sufficient to effect electromigration but is insufficient to effect electroporation.

55. The method recited in Claims 46, further comprising the step, following the activating step, of activating the areas of conductivity sufficiently to cause electroporation in the target tissue.

56. The method recited in Claims 46, further comprising the step, substantially simultaneously with the activating step, of activating the areas of conductivity sufficient to cause electroporation in the target tissue.

57. A method for making a molecule electromanipulator comprising the steps of:

affixing at least one member containing areas of discrete conductivity to a support in spaced-apart relation, each area of conductivity being differentially activatable;

providing circuit communication between each conductivity area and a source of electrical energy, the conductive areas configured to establish a low-level electromagnetic field *in vivo* between selected conductivity areas for manipulating a molecule relative to a target tissue and a higher-level electromagnetic field for causing transient permeability of a cell membrane within the target tissue; and

providing switching means between each conductivity area and the electrical energy source to permit differential activation of the areas of differing conductivity on each electrode member.

58. The method recited in Claim 57, further comprising the step of providing means for controlling the switching means adapted to activate the areas of conductivity in a preselected pattern.